

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局



(43) 国际公布日:
2005年6月30日 (30.06.2005)

PCT

(10) 国际公布号:
WO 2005/058460 A1

- (51) 国际分类号⁷: B01D 46/00, 29/54, 29/50, 39/12
(21) 国际申请号: PCT/CN2004/001415
(22) 国际申请日: 2004年12月6日 (06.12.2004)
(25) 申请语言: 中文
(26) 公布语言: 中文
(30) 优先权:
200310117410.6 2003年12月17日 (17.12.2003) CN
200420083806.3 2004年9月8日 (08.09.2004) CN
(71) 申请人(对除美国以外的所有指定国): 广州市新力金属有限公司 (SUNNY METAL INC.) [CN/CN]; 中国广东省广州市番禺南村员岗金新路01号信箱, Guangdong 511442 (CN).
(72) 发明人; 及
(75) 发明人/申请人(仅对美国): 胡瑞华 (HU, Ruihua) [CN/CN]; 中国广东省广州市番禺南村员岗金新路01号信箱, Guangdong 511442 (CN).
(74) 代理人: 广州粤高专利代理有限公司 (GUANGZHOU YUEGAO PATENT AGENT LIMITED CORPORATION); 中国广东省广州市建设大马路党校大厦5楼ABC单元, Guangdong 510060 (CN).
- (81) 指定国(除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SC, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
(84) 指定国(除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚专利 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

根据细则4.17的声明:

— 关于发明人身份(细则4.17(i))仅对美国

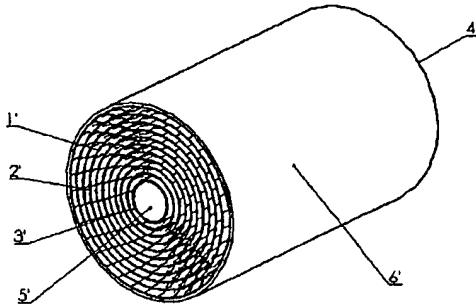
本国际公布:

— 包括国际检索报告。

所引用双字母代码和其它缩写符号, 请参考刊登在每期PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: A FLUID FILTER

(54) 发明名称: 流体过滤器



WO 2005/058460 A1

(57) Abstract: The present invention provides a fluid filter which is especially fit for filtering carbon microparticles from the off-gas of diesel engine, as well as other types of fluids. The filter in the present invention includes a plate structure and a tube structure, in which the tube structure is preferably. The tube filter is mainly composed of multilayer cylindrical corrugated tube filter elements, multilayer cylindrical plate filter elements, a central tube and a housing; in which the innermost cylinder is a plate filter element which is welded with the central tube together; and the outermost cylinder also is a plate filter element which is welded with the inner surface of the housing together. The multilayer cylindrical corrugated tube filter elements are formed zigzag alternatingly superposed structure with the cylindrical plate filter elements. The cylindrical platbands of the two ends of the corrugated tube filter element are welded together with the nested cylindrical plate filter elements along one edge offering a seal in zigzag fashion. The both ends of the zigzag seal are a fluid inlet point and a fluid outlet point. The filter of the present invention has a large filter area ratio and a large handling capacity, but a small volume.

[见续页]



(57) 摘要

本发明涉及一种特别适用于过滤柴油发动机尾气碳微粒，同时也适用于过滤其它种类流体的流体过滤器；本发明的过滤器分为板式结构和管式结构，其中以管式结构为优。管式结构过滤器主要由多层圆筒形瓦楞管过滤元件、多层圆筒形平板过滤元件、中心管和外壳构成；其最内层圆筒为平板过滤元件，与中心管焊接在一起；其最外层圆筒也为平板过滤元件，与外壳内表面焊接在一起；多层圆筒形瓦楞管过滤元件与圆筒形平板过滤元件呈“之”字形交替套层结构；瓦楞管过滤元件两端的圆筒形平边与套装的圆筒形平板过滤元件的单边对齐焊接在一起呈“之”字形封口，“之”字形两端为流体进口端和流体出口端，本发明过滤面积比大，纳污量大，体积小。